

This section provides a very basic understanding of the various construction systems which will be included in any building project. The Handbook divides a project into 14 separate systems. In reality, all of these systems are interrelated and will have different relationships and costs depending on the overall composition of the project.

The chapter covers the following information for each system.

- A brief description of what the system entails.
- A matrix of alternatives and attributes of those alternatives (when applicable).
- A checklist identifying when decisions on each system should be considered.
- A brief description of each alternative or pertinent information regarding alternatives.
- When applicable, a list of appropriate uses for each system.
- When applicable, a list of items to look for in and questions to raise about each system.

Keep in mind that this portion of the Handbook is not an encyclopedia of all possible alternatives for every part of your new facility. The intended purpose of this section is to acquaint laypersons with the many possibilities and different solutions to design problems they may encounter. The section is styled to prompt questions about why a particular solution was selected and to make the reader aware that numerous solutions exist for every problem.

When weighing the cost impact of various alternatives, consider that choosing standard items or ordering an extra supply of non-standard items can save you money over the long-term.

When testing sample equipment or materials, be sure to test random samples, not just samples provided by the vendor, to make sure the items will perform consistently as required.

This section is not intended to provide the solutions to problems, but rather to evoke an attitude that to achieve economical solutions in building a facility, one must always ask why the selected solution is the best one and how much that solution will cost in first and life-cycle costs. Keep in mind that the cost values presented in this section are only guidelines. The least expensive alternative may not always be the best choice for your project. Always select what is most appropriate for each space, and be sure cost decisions are based on your program's needs, not just on cost.

In this chapter, you'll find information on the following systems:

- Sitework
- Foundations
- Structural Systems
- Exterior Enclosures
- Interior Partitions and Ceilings
- Interior Finishes
- Windows
- Doors
- Specialties and Equipment
- Plumbing
- Mechanical Systems
- Electrical Systems
- Security and Communications Systems